



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,484	11/08/2001	Robert E. Thompson	12010-7058	8415

23628 7590 09/02/2005

WOLF GREENFIELD & SACKS, PC
FEDERAL RESERVE PLAZA
600 ATLANTIC AVENUE
BOSTON, MA 02210-2211

EXAMINER

RIVELL, JOHN A

ART UNIT	PAPER NUMBER
----------	--------------

3753

DATE MAILED: 09/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.



UNITED STATES PATENT AND TRADEMARK OFFICE

COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
P.O. BOX 1450
ALEXANDRIA, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/005,484
Filing Date: November 08, 2001
Appellant(s): THOMPSON ET AL.

MAILED
SEP 02 2005
Group 3700

Peter C. Lando
Aaron W. Moore
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed June 2, 2005 appealing from the Office action mailed May 26, 2004.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,810,045	EVANS	09-1998
5,542,873	SHANK, Jr.	08-1996
3,476,440	SCHMIDT et al.	11-1969
4,335,744	BEY	06-1982

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23-25, 31, 32, 42, 44-47, 50, 53, 54, 56, 58 and 59 are rejected under 35 U.S.C. §102 (b) as being anticipated by Evans.

The patent to Evans discloses “a media control valve (56), comprising: a body (valve body 88) having a media inlet (90) and a media outlet (fluidly connected to pipe line 52); a flow path within the body including the media inlet and the media outlet; an air-actuated (via air supplied to port 108 and or 108’) closing member (94) positioned within the body (88) and constructed and arranged to provide all metering positions from a fully closed position to a fully open position” dependent on the value of fluid pressure supplied to port 108 and or 108’.

The device of Evans is considered to “meter” fluid flow by reason of the continuous reference to “metering piston” and the discussion at column 10, lines 30-40 which discuss the employment, but not the illustration, of “devices for regulating the introduction of air into the first inlet ‘under’ the drive piston and into the second inlet ‘above’ the drive piston”. Clearly, by regulating the value of pressure supplied to both sides of a piston, its position is regulated. As the metering piston 94 is directly connected to the drive piston, the position of the metering piston is thus regulated. By

Art Unit: 3753

regulating the position of the metering piston the flow of media through the valve is regulated or "metered".

Regarding claim 24, Evans discloses "a media control valve (56), comprising: a valve body (88) having a media inlet (90) and a media outlet (fluidly connected to pipe line 52), a plunger (94) positioned within the valve body (88); a sleeve (97) positioned within the valve body (88); a media opening (97A) in the sleeve (97), a housing (forming cylinder 104) connected to the valve body (88); a piston (10) positioned within the housing and connected to the plunger (94); and a base (92') connected to the valve body in communication with the media outlet; wherein the plunger, the piston, and the sleeve are constructed and arranged to provide all metering positions from a fully closed position to a fully open position" as set forth above, as recited.

Regarding claim 25, in Evans, "the base (92') comprises a unitary structure including a fluid passage (59) and an attachment mechanism (screws and holes therefore) adapted to attach the base (92') to the valve body (88)" as recited.

Regarding claim 31, in Evans, "at least one seal (such as at seal 96A is located) between the plunger (94) and the valve body (88) adapted to resist the passage of one of media, fluid, contaminants, and combinations thereof between the valve body and the housing" as recited.

Regarding claim 32, in Evans, "three seals (96A, 96C, 96D, in fig. 3B are) positioned between the plunger (94) and the valve body (88)" as recited.

Regarding claim 42, in Evans, "a valve seat" is read on the interior surface of sleeve 97 as recited.

Art Unit: 3753

Regarding claim 44, in Evans, "a gentle seal" is disclosed in that, as discussed in applicants specification, a "gentle seal" is one in which there are no sharp edges which, as disclosed for the prior art, lead to premature seal degradation between the head and seat. In Evans, there are no sharp edges between the cylindrical valve head 94 and the cylindrical seat surface inside of sleeve 97 which would lead to premature seal degradation. Thus a "gentle seal" is disclosed.

Regarding claim 45, Evans discloses "a media control system (see fig. 1) comprising: a media vessel (12); an air flow path (52); a media flow path (from vessel 12 to air path 52 through valve 56) including a media inlet (90) connected to the media vessel (12) and a media outlet (at 112, 114 in fig. 2) connected to the air flow path; and a media control valve (56) positioned on the media flow path; wherein the media control valve is air actuated (via air supplied at port 108 and/or 108') and is constructed and arranged to provide all metering positions from a fully closed position to a fully open position" as set forth above.

Regarding claim 46, in Evans, "the media flow path axis is substantially perpendicular with respect to a surface upon which the media control system rests" as exemplified in fig. 1, as recited.

Regarding claim 47, in Evans, "the media flow path axis (through valve 56) is substantially perpendicular to an axis of the air flow path (52)" as exemplified in fig. 1, as recited.

Regarding claim 50, in Evans "a piston (100, is shown) connected to the closing member (94)" as recited.

Art Unit: 3753

Regarding claim 53, in Evans, "a gentle seal" is exemplified by no sharp edges between the valve head 94 and interior sealing surface of sleeve 97, as recited.

Regarding claim 54, in Evans, "the flow path has a substantially linear axis" as recited.

Regarding claim 56, in Evans, "the media control valve (56) comprises a piston (100)" as recited.

Regarding claim 58, in Evans, "the media control valve (56) further comprises a gentle seal" as exemplified by no sharp edges between the valve head 94 and interior sealing surface of sleeve 97, as recited.

Regarding claim 59, in Evans, "the media flow path has a substantially linear axis" as recited.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 24, 25, 29, 31-38, 42, 44-47, 56 and 58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shank, Jr. ('873) in view of Schmidt et al. or Evans.

Regarding claim 24, Shank, Jr. ('873) discloses "a media control valve, comprising: a valve body (40) having a media inlet and a media outlet; a plunger (45) positioned within the valve body; a sleeve (52) positioned within the body: a media opening (any one of openings 56) in the sleeve; a housing (forming cylinder 42) connected to the valve body (40); a piston (46) positioned within the housing and connected to the plunger; and a base (read at the conduit portion at reference numeral 40) connected to the valve body in communication with the media outlet" as recited.

Thus Shank, Jr. ('873) discloses all the claimed features with the exception of having "the plunger, the piston, and the sleeve (being) constructed and arranged to provide all metering positions from a fully closed position to a fully open position".

The patent to Schmidt et al. discloses that it is known in the art to employ a metering piston 65, metering media flow through the valve body for the purpose of regulating the flow of media through the valve.

The patent to Evans discloses that it is known in the art to employ a metering piston 94, operated by an air pressure responsive drive piston 100, in which the value of air pressure supplied to the piston can be regulated (column 10, lines 30-40 discuss the employment, but not the illustration, of "devices for regulating the introduction of air into the first inlet 'under' the drive piston and into the second inlet 'above' the drive piston". Clearly, by regulating the value of pressure supplied to both sides of a piston, its position is regulated. As the metering piston 94 is directly connected to the drive piston, the position of the metering piston is regulated. By regulating the position of the metering piston the flow of media through the valve is regulated or "metered") for the purpose of regulating the flow of media through the valve.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Shank, Jr. ('873) variability of the value of air

pressure supplied to the air operator inlet at air inlet 50 for the purpose of regulating the flow of media through the valve by regulating the position of the valve relative to the seat as recognized by Schmidt et al. or Evans.

Regarding claim 25, Shank, Jr. ('873) discloses the claimed invention except for "the base... including... an attachment mechanism adapted to attach the base to the valve body".

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the "base" element and the valve body of Shank, Jr. ('873) from separate elements and then to attach them together, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179. Thus it would have been obvious to, for example, form the conduit section at reference numeral 40 from plural pieces.

Regarding claim 29, in Shank, Jr. ('873), "the media opening (56 has) a first portion proximate to the media outlet and a second portion distal to the media outlet, wherein the second portion is broader than the first portion".

Shank, Jr. ('873) discloses such an "opening" in that, any one of the openings 56, when communicating with port 63, 61, include such a feature recited above as follows.

The bore of orifice 56 through sleeve 52 is not perpendicular to the longitudinal axis of sleeve 52. The sleeve 52 is hollow and cylindrical. As such the intersection of the non perpendicular bore 56 with the cylindrical inner surface of sleeve 52 forms an ellipse having a longer major axis, here this axis extends parallel to the axis of sleeve 52 and a shorter minor axis, here extending into and out of the plane of the figure. Looking at this "opening" from the "media outlet" located at, for example, along a linear axis including the media inlet and media outlet, the "opening" at 56 presents a "first portion proximal (closest) to the media outlet" and is near the extreme left end of the

Art Unit: 3753

major axis of the ellipse. At this location of the ellipse the cross section of the opening is small. The "second portion" is read at the minor axis of the ellipse, is located "distal to the media outlet" and includes a larger cross sectional flow path than the first portion.

Regarding claim 31, in Shank, Jr. ('873), "at least one seal (219 and/or 230 is) positioned between the plunger (45) and the valve body adapted to resist the passage of one of media, fluid, contaminants, and combinations thereof between the valve body and housing" as recited.

Regarding claims 32 and 33 Shank, Jr. ('873) discloses the claimed invention except for "three seals... constructed as a unitary piece".

It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the "seal element" 219 and/or 230 of Shank, Jr. ('873) from plural separate seal elements and then to construct them unitarily, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

Regarding claims 34 and 35, in Shank, Jr. ('873), the "housing (forming cylinder 42) comprises an exhaust chamber (48) including a vent" to which is attached a "filter" or muffler 71 (claim 35) as recited.

Regarding claim 36, Shank, Jr. ('873) discloses the claimed invention except for "filter" 71 of Shank, Jr. ('873) "adapted to filter particles greater than about 20 microns in diameter.

The recitation of "greater than about 20 microns in diameter" is clearly an obvious design expedient over the filter/muffler hole size as disclosed in Shank, Jr. ('873) which provide no new and/or unexpected results nor solves any stated problem with respect to the "filter" 71 of Shank, Jr. ('873). Moreover, it is believed readily apparent to those of

Art Unit: 3753

ordinary skill in the art that the hole size of a filter element determines the particulate size filtered out of the flow of fluid.

Regarding claim 37, in Shank, Jr. ('873), the "valve body (40) and the housing (forming cylinder 42) comprise two distinct structures adapted to be joined together" by screws 53, 54 as recited.

Regarding claim 38, in Shank, Jr. ('873), clearly "the valve body and housing (comprise) a mating structure" as recited so as to be properly joined.

Regarding claim 42, in Shank, Jr. ('873), "a valve seat" is read on the interior surface of sleeve 52 mating with the exterior surface of valve stem 45 as shown in the closed position of figure 2.

Regarding claim 44, in Shank, Jr. ('873) the valve further includes "means providing a gentle seal" in that, as defined in applicants specification, there are no sharp edges of the valve stem 45 mating with the interior surface of sleeve 52 forming the valve sealing surfaces. When the valve of Shank, Jr. ('873) moves, the exterior surface of the stem 45 slides over the interior surface of the sleeve 52. As such there are no sharp edges which, as disclosed for the prior art, lead to premature seal degradation.

Regarding claim 45, Shank, Jr. ('873) discloses "a media control system comprising: a media vessel (24, fig. 1); an air flow path (at 43 in fig. 2); a media flow path including a media inlet (61) connected to the media vessel and a media outlet (at reference numeral 42) connected to the air flow path (43, via port 79); and a media flow control valve (40) positioned on the media flow path" as recited.

The patent to Schmidt et al. discloses that it is known in the art to employ a metering piston 65, metering media flow through the valve body for the purpose of regulating the flow of media through the valve.

The patent to Evans discloses that it is known in the art to employ a metering piston 94, operated by an air pressure responsive drive piston 100, in which the value of air pressure supplied to the piston can be regulated (column 10, lines 30-40 discuss the employment, but not the illustration, of "devices for regulating the introduction of air into the first inlet 'under' the drive piston and into the second inlet 'above' the drive piston". Clearly, by regulating the value of pressure supplied to both sides of a piston, its position is regulated. As the metering piston 94 is directly connected to the drive piston, the position of the metering piston is regulated. By regulating the position of the metering piston the flow of media through the valve is regulated or "metered") for the purpose of regulating the flow of media through the valve.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Shank, Jr. ('873) variability of the value of air pressure supplied to the air operator inlet at air inlet 50 for the purpose of regulating the flow of media through the valve by regulating the position of the valve relative to the seat as recognized by Schmidt et al. or Evans.

Regarding claim 46, in Shank, Jr. ('873), "the media flow path axis (along the flow path from 61 to 63, 56, 42, 79) is substantially perpendicular with respect to a surface upon which the media control system rests" identified by the horizontal air flow path 43 as recited.

Regarding claim 47, in Shank, Jr. ('873), "the media flow path axis (along the flow path from 61 to 63, 56, 42, 79) is substantially perpendicular to an axis of the airflow path" 43 as recited.

Regarding claim 56, in Shank, Jr. ('873), "the media control valve comprises a piston" at piston 208 as recited.

Regarding claim 58, in Shank, Jr. ('873), "the media control valve further comprises a gentle seal" as noted above concerning claim 42.

Regarding claim 59, in Shank, Jr. ('873), "the media flow path has a substantially linear axis" as recited.

Claims 30, 51, 52, 55 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shank, Jr. ('873) in view of Schmidt et al., as applied under 35 USC 103 above or Evans, as applied under 35 USC 102(b), as applied to claims 24, 25, 29, 31-38, 42, 44-47, 56 and 58-59 above, further in view of Bey.

The patent to Shank, Jr. ('873), as modified by Schmidt et al. or Evans alone, discloses all the claimed features with the exception of having a convex, in the direction of the valve body, contaminant isolation area on the side of piston 46 facing away from the media flow path.

The patent to Bey discloses that it is known in the art to employ a piston element 118 which includes a contaminant isolation region above the piston 118 which will contain and isolate leakage, from below, by the piston by collecting such leakage in the convex cutout region therein for the purpose of isolating leakage in the convex portion of the piston.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Shank, Jr. ('873), as modified by Schmidt et al. or in Evans, a convex cutout portion in the piston thereof for the purpose of isolating and containing contaminant leaked across the piston as recognized by Bey.

(10) Response to Argument

A) 35 USC 102(b)

Appellant contests the rejection of claims 23-25, 31, 32, 44-47, 50, 53, 54, 56, 58 and 59 based on anticipation by the reference to Evans by alleging that the reference to

Evans fails to disclose a valve device controlling the flow of media therethrough that is "constructed and arranged to provide all metering positions from a fully closed position to a fully open position." This is the only limitation of these claims appellant argues is lacking. Apparently, appellant is of the belief that the remaining limitations of these claims are met as specified above.

In support of this argument appellant relies on several passages of the Evans description and essentially concludes that because the written description of Evans fails to demonstrate any operational characteristics of the valve disclosed therein that perform a "metering" function, the valve thus cannot be "constructed and arranged to provide all metering positions from a fully closed position to a fully open position."

This argument and conclusion is unpersuasive.

As noted above in the explanation accompanying the rejection, by regulating the value of pressure supplied to both sides of the piston 94 of Evans, its position is regulated. As the metering piston 94 is directly connected to the drive piston, the position of the metering piston is thus regulated. By regulating the position of the metering piston the flow of media through the valve is regulated or "metered".

Additionally, when operating the device by employing a drive pressure on only one side of piston 90 and retaining return spring 115, employing a drive pressure value applied to motor port 108 within a range of, for example zero to a value equal to the greatest spring strength at maximum compression, the piston will be located between its closed position, when zero pressure is applied, its maximum open position when the maximum pressure is applied and at any position therebetween when the appropriate pressure value is applied. As the valve stem plunger 94 is rigidly connected to the piston, the plunger 94 is also physically located between its closed position, its maximum open position and at any position therebetween dependent of the pressure

value applied at port 108. As the plunger traverses the entire cross section of the inlet port 97A when moving from its closed position to its open position, at any position therebetween a portion of the cross section will be open and the remaining portion will be blocked off by plunger 94. Fluid flow e.g. "media" is thus "metered."

In response to appellants contention that the Examiner cannot read this function into the structure disclosed in the reference is made to M.P.E.P. 2131.01, section III which states in pertinent part:

"III. TO SHOW THAT A CHARACTERISTIC NOT DISCLOSED IN THE REFERENCE IS INHERENT

Extra Reference or Evidence Can Be Used To Show an Inherent Characteristic of the Thing Taught by the Primary Reference

"To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." *Continental Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 USPQ2d 1746, 1749 (Fed. Cir. 1991) (The court went on to explain that "this modest flexibility in the rule that 'anticipation' requires that every element of the claims appear in a single reference accommodates situations in which the common knowledge of technologists is not recorded in the reference; that is, where technological facts are known to those in the field of the invention, albeit not known to judges." 948 F.2d at 1268, 20 USPQ at 1749-50.). Note that as long as there is evidence of record establishing inherency, failure of those skilled in the art to contemporaneously recognize an inherent property, function or ingredient of a prior art reference does not preclude a finding of anticipation. *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1349, 51 USPQ2d 1943, 1948 (Fed. Cir. 1999)"

In view of the widely recognized fluid pressure operation of the valve device of Evans it is believed that ordinarily skilled artisans would easily recognize that the fluid pressure operated piston used therein is clearly capable of being operated by a drive

Art Unit: 3753

pressure value within a range of, for example, zero to a value equal to the greatest spring strength at maximum compression, to thus position the piston between extreme positions e.g. closed and maximum open, and at any position therebetween by appropriate applied pressure thus performing a "metering" function in the manner claimed. Moreover, utilizing the threaded adjustment rod 123 to limit the opening travel of the piston readily limits the travel of the plunger 94. In so doing "metering" is performed upon successive valve operations after which, each time, the travel stroke is readjusted to permit a different valve stroke than the previous operation.

B) 35 USC 103(a)

Appellant argues that the proposed rejection under 35 USC 103(a) as being obvious over Shank, Jr. ('873) in view of Schmidt et al. or Evans is improper for failure of the proposed combination to 1) "teach or suggest the all the claimed features" 2) contain "some specific suggestion or motivation, either in the cited reference(s) or in the knowledge generally available to one of ordinary skill in the art, to modify the reference(s)" and 3) contain "a reasonable expectation of success".

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

Art Unit: 3753

In this case, the patent to Schmidt et al. is relied on to demonstrate a known "media" valve of the type of the instant application claims in which a "metering" of the fluid media is performed. For example, in Schmidt et al., the position of the piston 70, which is fluid pressure driven as supplied by fluid pressure tube 75, is limited between its extreme closed and full open positions by the position of a threaded shaft 81, which includes a stop surface 80a which abuts against the piston 70, limiting the travel or stroke of the piston to a certain open position, thus limiting the amount the inlet port at seat 85 is open, thus performing a "metering" function. Clearly this piston is "constructed and arranged to provide all metering positions from a fully closed position to a fully open position" upon successive operations being performed with readjustment of the valve stop 80a after each operation.

The further argument that it would be improper "to replace the plunger and piston of Shank, Jr. ('873) with the threaded shaft of Schmidt et al. because to do so would change the operation of the valve of Shank, Jr. ('873)" is believed misplaced.

The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Here it is the clearly suggestion on Schmidt et al. of employing a "metering" function to limit the amount of "media" flowing through the valve and thus the amount of "media" added to the air flow in a sand blasting operation.

Further, even if the express teachings of Schmidt et al. were required to be employed in Shank, Jr. ('873), such would be accomplished by adding to the valve actuator structure of Shank, Jr. ('873) at cylinder 41, a threaded shaft from the spring 72 side of the piston to limit opening stroke of the piston thus performing a "metering" function as expressly taught by Schmidt et al. This modification, clearly taught by Schmidt et al., would not require the removal of the plunger and piston of Shank, Jr. ('873) nor results in a threaded valve actuator.

The further contention of no reasonable expectation of success is believed misplaced in that, as clearly taught in Schmidt et al., where it is presumed that the structure works as disclosed therein in a "successful" manner, employing a threaded shaft in Shank, Jr. ('873) to form an adjustable valve opening limit stop to limit the opening of the valve relative to the controlled port to perform a "metering" of the "media" will enjoy the same, if not very similar success. While this modification may change the specific operational characteristics, such as changing from an on/off type valve to a metering type valve, of the valve of Shank, Jr. ('873), such "change" is not of the type argued that fundamentally changes the principle operation of the valve to that of something completely different than a valve.

Concerning Evans, the allegation that because Evans teaches an on/off valve, one could not add a metering feature to Shank, Jr. ('873) and meet the criteria 1-3 above, is also misplaced.

As noted above, the ordinarily skilled artisan would recognize from the structural elements disclosed that the valve device can be actuated, with proper drive pressure, in

Art Unit: 3753

a "metering" manner. As applied to Shank, Jr. ('873), one need merely adopt the appropriate drive pressures to be applied to the fluid pressure drive at pressure supply 50 actuating the fluid pressure operated piston 46. Clearly all the claimed structure will remain, there is no fundamental change of the device to something other than the valve it is and a reasonable expectation of success, as enjoyed by Evans, will thus be conferred on the structure of Shank, Jr. ('873) as modified.

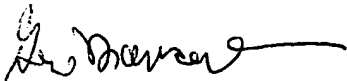
As for the remaining claims rejected under 35 USC 103(a) appellant repeatedly relies on the dependency of these claims to the alleged allowable respective dependent claim for patentability. As set forth above in the explanation of the applied rejection, all of the features of all the claims find their equivalents in the reference(s) as applied.

For the above reasons, it is believed that the rejections should be sustained.

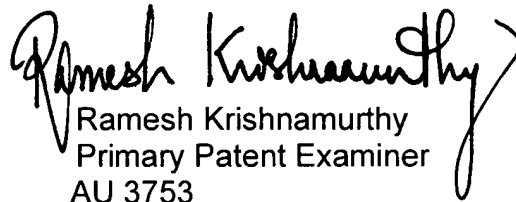
Respectfully submitted,



John Rivell
Primary Examiner
Art Unit 3753



Conferees:
Gene Mancene
Supervisory Patent Examiner
AU 3753



Ramesh Krishnamurthy
Primary Patent Examiner
AU 3753

WOLF GREENFIELD & SACKS, PC
FEDERAL RESERVE PLAZA
600 ATLANTIC AVENUE
BOSTON, MA 02210-2211